

Abstract

The invention is in the field of immunogenicity. In one embodiment, the invention relates to a method of identifying T-cell epitopes in amyloid beta peptide or homologue thereof. In another embodiment, the invention relates to a vaccine comprising an amyloid beta peptide or homologue thereof, whereby the selected peptide is a peptide which lacks certain T-cell epitopes or a peptide which is modified by deleting or modifying amino acids so as to reduce or eliminate the T-cell epitopes. The selected peptides are further assessed for reduced capacity to form fibrils, reduced cytotoxicity, and a reduced ability to induce a cellular autoimmune response. The selected peptides are further assessed for ability to induce a humoral immune response. In another embodiment, the invention relates to a method of predicting the reaction of an individual to a vaccine, which comprises amyloid beta peptide or homologue thereof, based on the HLA haplotype of the subject. In another embodiment, the invention provides a method for matching a vaccine comprising amyloid beta peptide or homologue thereof to an individual, based on the HLA haplotype of that individual. In another embodiment, the invention provides a vaccine comprising an amyloid beta peptide or homologue thereof, whereby the amyloid beta peptide or homologue thereof, lacks the ability to induce a T-cell response.